

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028161**Date Inspected:** 13-Aug-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

12E-E2.1-C1 (Exterior)

This QA Inspector randomly monitored the in process Shielded Metal Arc Welding (SMAW) of temporary attachment sites along the weld seam at 12E-E2.1-C1 on the exterior of the OBG. ABF/JV qualified welder Deli Zhang #4735 was observed grinding the areas and backfilling the sites and then ground flush utilizing a small disc grinder. Prior to welding QC Inspector Salvador Merino was observed monitoring the pre-heating of the joint and the parameters as they pertain to ABF-WPS-D1.5-1004-Repair. This QA Inspector verified that the 3.2mm electrodes were stored in an electrically heated thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters. The welder was observed grinding and blending the work utilizing a small disc grinder. This QA Inspector made subsequent observations throughout the shift and noted that the welding at this location was completed on this date.

QC UT (Exterior)

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This QA Inspector randomly observed QC Inspectors Pat Swain at 12E PP111.1-C1 on the exterior of the OBG and John Pagliero at 12E-E2.1 on the interior of the OBG performing Ultrasonic Testing (UT). The QC Inspectors were observed scanning from each side of the weld and the scanning pattern as described in D1.5 6.24. The QC Inspectors were noted as identifying rejectable indications and the work at these locations is ongoing and appeared to be in general conformance with the contract documents and SE-UT-D1.5-CT-100-Revision 4.

12E PP111.1-B1 (Interior)

This QA Inspector randomly observed ABF welder Rick Clayborn #2773 performing the back-gouge operation of ultrasonic rejectable indications on 12E PP111.1-LS1 and LS3 on the interior of the OBG. This QA Inspector observed QC Inspector William Sherwood perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector observed that no rejectable indications were present. The dimensions of the excavations were:

12E PP111.1-LS1-y+0mm; 230mm in length, 30mm wide and 10mm deep.

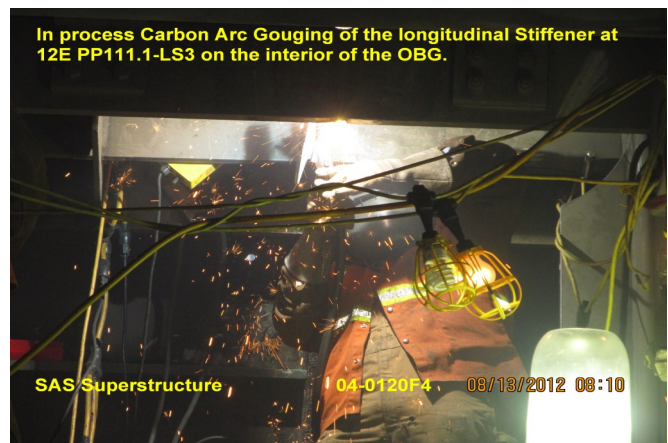
12E PP111.1-LS3-y+120mm; 110mm in length, 20mm wide and 30mm deep.

13E PP120-2.0-FBW1/FBW2 (Exterior)

This QA Inspector randomly observed ABF/JV Chris Bowles #9317 perform SMAW in the 2G horizontal and 3G vertical positions on the Floor Beam Webs at 13E PP120-2.0-FBW1/FBW2 on the exterior of the OBG. The welder was observed performing multiple pass production welding on the 20mm thick SPCM material with E7018-H4R electrodes drawing amperage of 132 and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1050 for the single bevel joint and ABF-WPS-D1.5-1040C for the double bevel joint. This QA Inspector observed QC Inspector Fred Michels using a Fluke infra-red temperature gauge to verify the preheat temperature of more than 150°F. This QA Inspector performed a verification of the welding parameters and observed 132 amperes on the 3.2mm diameter electrode. The welding appeared to comply with the WPS's and at the end of the shift, the welding was still continuing and should remain tomorrow.

Summary of Conversations:

Discussed welder assignments and locations with Quality Control Inspector Salvador Merino.



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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

Inspected By:	Frey,Doug	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
